UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/364,794	07/30/99	BERGE J	7480-PA1CP2

PM82/0705

JAMES W MCLAIN
BROWN MARTIN HALLER & MCCLAIN LLP
1660 UNION STREET
SAN DIEGO CA 92101

EXAMINER	
SHAPIRO,J	
ART UNIT	**PAPER NUMBER**
3651	12

DATE MAILED: 07/05/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 09/364,794	Applicant(s) BERGE ET AL.	
	Examiner Jeffrey A. Shapiro	Art Unit 3651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 April 2001* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,11,39,59,65,72,97,102,105,126,128,138,145,151 and 164* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,11,39,59,65,72,97,102,105,126,128,138,145,151 and 164* is/are rejected.

7)☒ Claim(s) _____ is/are objected to.

8)☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)
16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
18) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
19) ☐ Notice of Informal Patent Application (PTO-152)
20) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1, 11, 39, 59, 72, 102, 105, 126, 128, 138, 145 and 164 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wade in view of Cook.

Wade discloses the apparatus for conveying ice as follows.

As described in Claim 1;

1.) a hollow elongated ice conduit (17 and 18) connecting said source (11) of ice and said remote location (12, 13, and 14) and providing ice communication therebetween;

2.) a receptor (12, 13, and 14) at said remote location for receiving said ice;

3.) an air blower (16) in fluid communication through an air line with said receptor for withdrawing air from said conduit and creating a moving fluid with positive air pressure substantially throughout said conduit, said positive air pressure causing said ice to traverse said conduit from said source into said receptor;

As described in Claim 11;

4.) said receptor at said remote location comprises an accumulator having therein an openable gate (32) for release therefrom at said remote location of accumulated pieces of ice conveyed thereto from said source;

As described in Claim 39;

5.) said vacuum line (17) connecting in fluid communication into said hollow conduit at a first point of connection (19) upstream of a second point of connection (20) of said hollow conduit into said receptor (12), and spaced apart from said second point of connection by an interval not greater than a distance that said ice pieces can traverse under momentum imparted to them by their prior conveyance by said negative air pressure (note the distance between the connection point of (19) with (17) from the connection point of (17) with 20), such that diversion of at least a portion of conveying force of said negative air pressure at said first point of connection does not prevent said ice pieces from continuing to traverse entirely through said hollow conduit into said receptor;

As described in Claim 59;

6.) said receptor (12) being disposed adjacent to an inlet of a subsequent conduit (17) leading to a subsequent accumulator at another remote location (13), and said pieces of ice released from said receptor being deposited into said inlet for conveyance through said subsequent conduit to said subsequent accumulator at said another remote location (note that whether said ice pieces are deposited into said receptor (12) and then receptor (13) through conduit (17) directly, or said ice pieces are deposited into said receptor (12), said receptor then depositing them into

the next receptor (13), these two schemes are considered to be equivalent);

As described in Claim 72;

7.) sensor means (36, 37, and 38) for detecting the presence or absence of ice in said receptor;

As described in Claim 102;

8.) said receptor (12) at said remote location comprises an air lock device (27) which is connected to said ice conduit (17) or (26) on an upstream side and which has an inlet for pressurized air from a source thereof on a downstream side and another conduit (20) extending from said downstream side for passage of said pressurized air, such that ice entering said air lock device from said ice conduit passes through said air lock device and is propelled through said another conduit at high velocity by said pressurized air;

As described in Claim 105;

9.) that portion of said another conduit downstream of said air lock comprises flexible tubing with an outlet at an end distal from said air lock device, and further comprising directing means for manual, mechanical, pneumatic or electrical positioning of said outlet end of said flexible tubing; (Note that (27) is moved by solenoid (29)). Also note that flexible tubing is considered to be a functional equivalent of non-flexible tubing since they are both conduits forming the entrainment path of the ice. Flexible tubing

is notorious in the art for precipitating alignment of a conduit outlet with an ultimate target point.)

As described in Claim 126;

10.) a process of conveying ice comprising as follows;

a.) providing a hollow elongated ice conduit connecting said source of ice and said remote location and providing ice communication therebetween, a receptor at said remote location for receiving said ice, and an air blower in fluid communication through an air line with said receptor for withdrawing air from said conduit and creating a motive air force comprising said positive air pressure substantially throughout said conduit, said positive air pressure causing said ice to traverse said conduit from said source into said receptor;

b.) withdrawing air from said receptor and conduit and creating a motive air force comprising said positive air pressure in said receptor and conduit;

c.) causing said ice to traverse said conduit from said source into said receptor under the influence of said positive air pressure;

As described in Claim 128;

11.) a process where said receptor comprises an accumulator, said process further comprising;

a.) providing an openable gate in said accumulator at said remote location;

b.) causing pieces of ice conveyed into said accumulator through said conduit by said vacuum to come to rest bearing upon said gate, said gate being biased against said opening;

c.) releasing of accumulated pieces of ice conveyed from said source from said accumulator at said remote location by counteracting or eliminating such biasing;

As described in Claim 138;

12.) a process as in Claim 126, further described as follows;

a.) connecting said vacuum line in fluid communication into said ice conduit at a first point of connection upstream of a second point of connection of said ice conduit into said ice receptor, and spaced apart from said second point of connection by an interval not greater than a distance that said ice pieces can traverse under momentum imparted to them by their prior conveyance through said conduit by said negative air pressure;

b.) conveying said ice pieces under that amount of force of said negative air pressure at said first point of connection sufficient to cause said ice pieces to continue to traverse entirely through said first conduit and into said receptor without diversion of any ice pieces into said vacuum line;

As described in Claim 145;

13.) said receptor comprises an ice dispenser and further comprising detecting the presence of ice in said ice dispenser (36, 37, and 38);

As described in Claim 164;

14.) a plurality of receptors (12, 13, and 14) or said ice sources or said ice sources and said conduit having an intermediate division point from which a plurality of branch conduits extend (17, 20), each branch conduit leading directly or through at least one intermediate further division point from which a subsequent plurality of further branch conduits extend, to an ice communication connection with a respective one of said plurality of receptors or ice sources (note that there are intermediate points, such as where (20) branches off into (13) as an example of one of a number of branch points);

Wade does not expressly disclose use of negative air pressure to create an air flow as a motive force for transfer of ice particles from one location to another.

Cook discloses the use of both negative air pressure and positive air pressure interchangeably to create an air flow as a motive force for transfer of items entrained in said air flow from one location to another.

Both Wade and Cook are analogous art as they both address the problem of movement of items within an air flow from one location to another. In addition, they both represent technology found in Classes 406 and 243.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to have used negative air pressure to supply motive force to an air stream for

entraining ice particles so as to move them from location to location instead of positive air pressure as these two modes of motive force for entraining ice and other particles is notorious in the art and considered to be interchangeable with each other. For example, note Wagner, Ables et al, Jacobson et al, Newman et al, Fancher, Vande Sande and Wuertele et al which all use negative air pressure, i.e. a vacuum, to create an air stream for entraining and moving particles from one point to another. Regardless of what the particles are composed of, that is, whether or not they are ice, grain, gravel, powder or another functionally equivalent particulate material, the technology used is the same. Further, note that as an ice making machine, Wade inherently uses vacuum compressors to compress fluid for cooling purposes. See also abstract of Cook.

Therefore, it would have been obvious to combine Wade with Cook to obtain the invention as specified in Claims 1, 11, 39, 59, 72, 102, 105, 126, 128, 138, 145, and 164.

Claims 65, 97, and 151, as understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Wade in view of Cook and further in view of Pink et al. Wade and Cook describes the ice conveying apparatus as described above. In addition, Wade discloses the following.

As described in Claim 97;

1.) cleaner introduction means for introducing a liquid cleaner into said ice conduit and conveying said liquid cleaner through said ice conduit under said negative air pressure, whereby passage of said cleaner through said ice conduit cleans contaminants from the interior of said conduit, and upon

discharge of said cleaner at an outlet of said conduit, removes from said conduit said contaminants entrained in said cleaner (note that it would be expedient for one of ordinary skill in the art to introduce a cleaning fluid into the device of Wade by means of the vacuum system employed by Wade, so as to clean out ice debris or ice sawdust built up over time);

Wade does not expressly disclose the ice unbridging means as described in Claims 65 and 151. Pink et al discloses the ice unbridging means as follows.

As described in Claim 65;

1.) a collector (42) into which ice pieces delivered from said source of ice are received, said collector having a first opening (23) into said first conduit, and further comprising unbridging means (35, 36, and 37) associated with said collector for presenting said released ice pieces individually and unbridged to said first opening, whereby said ice pieces pass through said first opening into said first conduit;

As described in Claim 151;

2.) receiving ice pieces delivered from said source of ice in at least partially bridged condition, and unbridging said ice pieces prior to delivering said ice piece into said ice conduit;

Both Wade and Pink et al are analogous as both are examples of ice conveying apparatus'. It would have been obvious at the time of the invention for one of ordinary skill in the art to have added the unbridging means of Pink et al to the receptor of Wade. The motivation/suggestion would have been to encourage the ice to gravitate from the

discharge port to another subsequent location. See lines 12-18 of column 3. Therefore, it would have been obvious to have combined Wade and Pink et al in order to obtain the invention as described in Claims 65, 97, and 151.

Conclusion

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Response to Arguments

4. Applicant's arguments with respect to Claims 1, 11, 39, 59, 65, 72, 97, 102, 105, 126, 128, 138, 145, 151, and 164 have been considered but are moot in view of the new ground(s) of rejection.

Wade discloses the use of positive air pressure for creating a motive force to entrain ice particles, and transport them from one location to another. Cook discloses the use of negative air pressure for creating a motive force to entrain items and transport them from one location to another. Cook further discloses that positive air pressure and negative air pressure are used interchangeably, as modes of entraining and transporting ice particles, or other functionally equivalent items such as grain or powder, in an air stream. It therefore follows that the combination of Wade and Cook disclose the Applicants' invention as previously described.

Regarding the rejection of Claim 164 under 35 U.S.C. 112, paragraph 2 as being indefinite, Applicants' arguments are unpersuasive. The issue is not whether or not what the claim is intended to be limited to, but whether or not it is clear and can be understood. This is not the case in this situation. As noted in the previous action, Claim 164 recites several possible permutations, as indicated by the following. In line 1, "said receptors or said ice sources". In line 3, "each branch conduit leading directly or through at least one intermediate point". In line 6, "an ice communication connection with a respective one of said plurality of receptors or ice sources". Because of the several possibilities of combinations of elements, it becomes unclear to those ordinarily skilled in the art as to what is meant by the claim. Therefore, Claim 164 stands rejected under 35 U.S.C. 112, paragraph 2 as being indefinite.

It is suggested that Applicants add appropriate separate claims to cover this subject matter while maintaining clarity.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey A. Shapiro whose telephone number is (703)308-3423. The examiner can normally be reached on 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher P. Ellis can be reached on (703)308-2560. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-0552 for regular communications and (703)308-0552 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-1113.

Jeffrey A. Shapiro
Patent Examiner,
Art Unit 3651

CHRISTOPHER P. ELLIS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600

July 1, 2001